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Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)  
217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2008; month=4; day=22; hr=14; min=30; sec=32; ms=192; ]

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Application No: 10561671 Version No: 1.0

Input Set:

Output Set:

Started: 2008-04-08 18:52:13.349  
Finished: 2008-04-08 18:52:15.498  
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 149 ms  
Total Warnings: 16  
Total Errors: 0  
No. of SeqIDs Defined: 22  
Actual SeqID Count: 22

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (2)
W 402	Undefined organism found in <213> in SEQ ID (3)
W 402	Undefined organism found in <213> in SEQ ID (5)
W 402	Undefined organism found in <213> in SEQ ID (6)
W 402	Undefined organism found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 402	Undefined organism found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 402	Undefined organism found in <213> in SEQ ID (20)
W 402	Undefined organism found in <213> in SEQ ID (21)

<110> Nielsen, Anders Vikso  
Andersen, Carsten  
Pedersen, Sven  
Hjort, Carsten

Thr Trp Thr Val Thr Ile Pro Leu Leu Gln Gly Gln Asn Ile Gln Phe  
50 55 60

Lys Phe Ile Lys Lys Asp Ser Ala Gly Asn Val Ile Trp Glu Asp Ile  
65 70 75 80

Ser Asn Arg Thr Tyr Thr Val Pro Thr Ala Ala Ser Gly Ala Tyr Thr  
85 90 95

Ala Ser Trp Asn Val Pro  
100

<210> 2  
<211> 99  
<212> PRT  
<213> Bacillus sp.

<400> 2

Thr Ser Asn Val Thr Phe Thr Val Asn Asn Ala Thr Thr Val Tyr Gly  
1 5 10 15

Gln Asn Val Tyr Val Val Gly Asn Ile Pro Glu Leu Gly Asn Trp Asn  
20 25 30

Ile Ala Asn Ala Ile Gln Met Thr Pro Ser Ser Tyr Pro Thr Trp Lys  
35 40 45

Thr Thr Val Ser Leu Pro Gln Gly Lys Ala Ile Glu Phe Lys Phe Ile  
50 55 60

Lys Lys Asp Ser Ala Gly Asn Val Ile Trp Glu Asn Ile Ala Asn Arg  
65 70 75 80

Thr Tyr Thr Val Pro Phe Ser Ser Thr Gly Ser Tyr Thr Ala Asn Trp  
85 90 95

Asn Val Pro

<210> 3  
<211> 102  
<212> PRT  
<213> Alcaliphilic Bacillus

<400> 3

Thr Ser Thr Thr Ser Gln Ile Thr Phe Thr Val Asn Asn Ala Thr Thr  
1 5 10 15

Val Trp Gly Gln Asn Val Tyr Val Val Gly Asn Ile Ser Gln Leu Gly  
20 25 30

Asn Trp Asp Pro Val Asn Ala Val Gln Met Thr Pro Ser Ser Tyr Pro  
35 40 45

Thr Trp Val Val Thr Val Pro Leu Pro Gln Ser Gln Asn Ile Gln Phe  
50 55 60

Lys Phe Ile Lys Lys Asp Gly Ser Gly Asn Val Ile Trp Glu Asn Ile  
65 70 75 80

Ser Asn Arg Thr Tyr Thr Val Pro Thr Ala Ala Ser Gly Ala Tyr Thr  
85 90 95

Ala Asn Trp Asn Val Pro  
100

<210> 4  
<211> 484  
<212> PRT  
<213> Bacillus flavothermus

<400> 4

Gly Ser Val Pro Val Asn Gly Thr Met Met Gln Tyr Phe Glu Trp Tyr  
1 5 10 15

Leu Pro Asp Asp Gly Thr Leu Trp Thr Lys Val Ala Asn Asn Ala Gln  
20 25 30

Ser Leu Ala Asn Leu Gly Ile Thr Ala Leu Trp Leu Pro Pro Ala Tyr  
35 40 45

Lys Gly Thr Ser Ser Ser Asp Val Gly Tyr Gly Val Tyr Asp Leu Tyr  
50 55 60

Asp Leu Gly Glu Phe Asn Gln Lys Gly Thr Val Arg Thr Lys Tyr Gly  
65 70 75 80

Thr Lys Thr Gln Tyr Ile Gln Ala Ile Gln Ala Ala His Thr Ala Gly  
85 90 95

Met Gln Val Tyr Ala Asp Val Val Phe Asn His Lys Ala Gly Ala Asp

100

105

110

Gly Thr Glu Leu Val Asp Ala Val Glu Val Asn Pro Ser Asp Arg Asn  
115 120 125

Gln Glu Ile Ser Gly Thr Tyr Gln Ile Gln Ala Trp Thr Lys Phe Asp  
130 135 140

Phe Pro Gly Arg Gly Asn Thr Tyr Ser Ser Phe Lys Trp Arg Trp Tyr  
145 150 155 160

His Phe Asp Gly Thr Asp Trp Asp Glu Ser Arg Lys Leu Asn Arg Ile  
165 170 175

Tyr Lys Phe Arg Gly Thr Gly Lys Ala Trp Asp Trp Glu Val Asp Thr  
180 185 190

Glu Asn Gly Asn Tyr Asp Tyr Leu Met Tyr Ala Asp Leu Asp Met Asp  
195 200 205

His Pro Glu Val Val Ser Glu Leu Lys Asn Trp Gly Lys Trp Tyr Val  
210 215 220

Thr Thr Thr Asn Ile Asp Gly Phe Arg Leu Asp Ala Val Lys His Ile  
225 230 235 240

Lys Tyr Ser Phe Phe Pro Asp Trp Leu Ser Tyr Val Arg Thr Gln Thr  
245 250 255

Gln Lys Pro Leu Phe Ala Val Gly Glu Phe Trp Ser Tyr Asp Ile Ser  
260 265 270

Lys Leu His Asn Tyr Ile Thr Lys Thr Asn Gly Ser Met Ser Leu Phe  
275 280 285

Asp Ala Pro Leu His Asn Asn Phe Tyr Ile Ala Ser Lys Ser Gly Gly  
290 295 300

Tyr Phe Asp Met Arg Thr Leu Leu Asn Asn Thr Leu Met Lys Asp Gln  
305 310 315 320

Pro Thr Leu Ala Val Thr Leu Val Asp Asn His Asp Thr Glu Pro Gly  
325 330 335

Gln Ser Leu Gln Ser Trp Val Glu Pro Trp Phe Lys Pro Leu Ala Tyr  
340 345 350

Ala Phe Ile Leu Thr Arg Gln Glu Gly Tyr Pro Cys Val Phe Tyr Gly  
355 360 365

Asp Tyr Tyr Gly Ile Pro Lys Tyr Asn Ile Pro Ala Leu Lys Ser Lys  
370 375 380

Leu Asp Pro Leu Leu Ile Ala Arg Arg Asp Tyr Ala Tyr Gly Thr Gln  
385 390 395 400

His Asp Tyr Ile Asp Ser Ala Asp Ile Ile Gly Trp Thr Arg Glu Gly  
405 410 415

Val Ala Glu Lys Ala Asn Ser Gly Leu Ala Ala Leu Ile Thr Asp Gly  
420 425 430

Pro Gly Gly Ser Lys Trp Met Tyr Val Gly Lys Gln His Ala Gly Lys  
435 440 445

Thr Phe Tyr Asp Leu Thr Gly Asn Arg Ser Asp Thr Val Thr Ile Asn  
450 455 460

Ala Asp Gly Trp Gly Glu Phe Lys Val Asn Gly Gly Ser Val Ser Ile  
465 470 475 480

Trp Val Pro Lys

<210> 5  
<211> 485  
<212> PRT  
<213> Bacillus sp

<400> 5

Ala Asn Thr Ala Pro Val Asn Gly Thr Met Met Gln Tyr Phe Glu Trp  
1 5 10 15

Asp Leu Pro Asn Asp Gly Thr Leu Trp Thr Lys Val Lys Asn Glu Ala  
20 25 30

Ser Ser Leu Ser Ala Leu Gly Ile Thr Ala Leu Trp Leu Pro Pro Ala  
35 40 45

Tyr Lys Gly Thr Ser Gln Ala Asp Val Gly Tyr Gly Val Tyr Asp Leu  
50 55 60

Tyr Asp Leu Gly Glu Phe Asn Gln Lys Gly Thr Ile Arg Thr Lys Tyr  
65 70 75 80

Gly Thr Lys Thr Gln Tyr Leu Gln Ala Ile Gln Ala Ala Lys Ser Ala  
85 90 95

Gly Met Gln Val Tyr Ala Asp Val Val Phe Asn His Lys Ala Gly Ala  
100 105 110

Asp Ser Thr Glu Trp Val Asp Ala Val Glu Val Asn Pro Ser Asn Arg  
115 120 125

Asn Gln Glu Thr Ser Gly Thr Tyr Gln Ile Gln Ala Trp Thr Lys Phe  
130 135 140

Asp Phe Pro Gly Arg Gly Asn Thr Tyr Ser Ser Phe Lys Trp Arg Trp  
145 150 155 160

Tyr His Phe Asp Gly Thr Asp Trp Asp Glu Ser Arg Lys Leu Asn Arg  
165 170 175

Ile Tyr Lys Phe Arg Gly Thr Gly Lys Ala Trp Asp Trp Glu Val Asp  
180 185 190

Thr Glu Asn Gly Asn Tyr Asp Tyr Leu Met Phe Ala Asp Leu Asp Met  
195 200 205

Asp His Pro Glu Val Val Ala Glu Leu Lys Asn Trp Gly Lys Trp Tyr  
210 215 220

Val Asn Thr Thr Asn Val Asp Gly Phe Arg Leu Asp Ala Val Lys His  
225 230 235 240

Ile Lys Tyr Ser Phe Phe Pro Asp Trp Leu Ser Tyr Val Arg Asn Gln  
245 250 255

Thr Gly Lys Asn Leu Phe Ala Val Gly Glu Phe Trp Gly Tyr Asp Val



260

265

270

Asn Lys Leu His Asn Tyr Ile Thr Lys Thr Asn Gly Ala Met Ser Leu  
275 280 285

Phe Asp Ala Pro Leu His Asn Asn Phe Tyr Ile Ala Ser Lys Ser Ser  
290 295 300

Gly Tyr Phe Asp Met Arg Tyr Leu Leu Asn Asn Thr Leu Met Lys Asp  
305 310 315 320

Gln Pro Ala Leu Ala Val Thr Leu Val Asp Asn His Asp Thr Gln Pro  
325 330 335

Gly Gln Ser Leu Gln Ser Trp Val Glu Pro Trp Phe Lys Pro Leu Ala  
340 345 350

Tyr Ala Phe Ile Leu Thr Arg Gln Glu Gly Tyr Pro Cys Val Phe Tyr  
355 360 365

Gly Asp Tyr Tyr Gly Ile Pro Lys Tyr Asn Ile Pro Gly Leu Lys Ser  
370 375 380

Lys Ile Asp Pro Leu Leu Ile Ala Arg Arg Asp Tyr Ala Tyr Gly Thr  
385 390 395 400

Gln Arg Asp Tyr Ile Asp His Gln Asp Ile Ile Gly Trp Thr Arg Glu  
405 410 415

Gly Ile Asp Ala Lys Pro Asn Ser Gly Leu Ala Ala Leu Ile Thr Asp  
420 425 430

Gly Pro Gly Gly Ser Lys Trp Met Tyr Val Gly Lys Arg His Ala Gly  
435 440 445

Lys Val Phe Tyr Asp Leu Thr Gly Asn Arg Ser Asp Thr Val Thr Ile  
450 455 460

Asn Ala Asp Gly Trp Gly Glu Phe Lys Val Asn Gly Gly Ser Val Ser  
465 470 475 480

Ile Trp Val Ala Lys  
485

<210> 6  
<211> 484  
<212> PRT  
<213> Alkaliphilic bacillus

<400> 6

Gly Ser Val Pro Val Asn Gly Thr Met Met Gln Tyr Phe Glu Trp Tyr  
1 5 10 15

Leu Pro Asp Asp Gly Thr Leu Trp Thr Lys Val Ala Asn Asn Ala Gln  
20 25 30

Ser Leu Ala Asn Leu Gly Ile Thr Ala Leu Trp Leu Pro Pro Ala Tyr  
35 40 45

Lys Gly Thr Ser Ser Ser Asp Val Gly Tyr Gly Val Tyr Asp Leu Tyr  
50 55 60

Asp Leu Gly Glu Phe Asn Gln Lys Gly Thr Val Arg Thr Lys Tyr Gly  
65 70 75 80

Thr Lys Thr Gln Tyr Ile Gln Ala Ile Gln Ala Ala His Thr Ala Gly  
85 90 95

Met Gln Val Tyr Ala Asp Val Val Phe Asn His Lys Ala Gly Ala Asp  
100 105 110

Gly Thr Glu Leu Val Asp Ala Val Glu Val Asn Pro Ser Asp Arg Asn  
115 120 125

Gln Glu Ile Ser Gly Thr Tyr Gln Ile Gln Ala Trp Thr Lys Phe Asp  
130 135 140

Phe Pro Gly Arg Gly Asn Thr Tyr Ser Ser Phe Lys Trp Arg Trp Tyr  
145 150 155 160

His Phe Asp Gly Thr Asp Trp Asp Glu Ser Arg Lys Leu Asn Arg Ile  
165 170 175

Tyr Lys Phe Arg Gly Thr Gly Lys Ala Trp Asp Trp Glu Val Asp Thr  
180 185 190

Glu Asn Gly Asn Tyr Asp Tyr Leu Met Tyr Ala Asp Leu Asp Met Asp  
195 200 205

His Pro Glu Val Val Ser Glu Leu Lys Asn Trp Gly Lys Trp Tyr Val  
210 215 220

Ile Thr Thr Asn Ile Asp Gly Phe Arg Leu Asp Ala Val Lys His Ile  
225 230 235 240

Lys Tyr Ser Phe Phe Pro Asp Trp Leu Ser Tyr Leu Arg Thr Gln Thr  
245 250 255

Gln Lys Pro Leu Phe Ala Val Gly Glu Phe Trp Ser Tyr Asp Ile Asn  
260 265 270

Lys Leu His Asn Tyr Ile Thr Lys Thr Asn Gly Ser Met Ser Leu Phe  
275 280 285

Asp Ala Pro Leu His Asn Asn Phe Tyr Ile Ala Ser Lys Ser Gly Gly  
290 295 300

Tyr Phe Asp Met Arg Thr Leu Leu Asn Asn Thr Leu Met Lys Glu Gln  
305 310 315 320

Pro Thr Leu Ser Val Thr Leu Val Asp Asn His Asp Thr Glu Pro Gly  
325 330 335

Gln Ser Leu Gln Ser Trp Val Glu Pro Trp Phe Lys Pro Leu Ala Tyr  
340 345 350

Ala Phe Ile Leu Thr Arg Gln Glu Gly Tyr Pro Cys Val Phe Tyr Gly  
355 360 365

Asp Tyr Tyr Gly Ile Pro Lys Tyr Asn Ile Pro Ala Leu Lys Ser Lys  
370 375 380

Leu Asp Pro Leu Leu Ile Ala Arg Arg Asp Tyr Ala Tyr Gly Thr Gln  
385 390 395 400

His Asp Tyr Ile Asp Asn Ala Asp Ile Ile Gly Trp Thr Arg Glu Gly  
405 410 415

Val Ala Glu Lys Ala Asn Ser Gly Leu Ala Ala Leu Ile Thr Asp Gly

420

425

430

Pro Gly Gly Ser Lys Trp Met Tyr Val Gly Lys Gln His Ala Gly Lys  
 435 440 445

Thr Phe Tyr Asp Leu Thr Gly Asn Arg Ser Asp Thr Val Thr Ile Asn  
 450 455 460

Ala Asp Gly Trp Gly Glu Phe Lys Val Asn Gly Gly Ser Val Ser Ile  
 465 470 475 480

Trp Val Pro Lys

<210> 7

<211> 517

<212> PRT

<213> Bacillus sp.:

<400> 7

Met Ser Leu Phe Lys Lys Ile Phe Pro Trp Ile Leu Ser Leu Leu Leu  
 1 5 10 15

Leu Phe Leu Phe Ile Ala Pro Phe Ser Ile Gln Thr Glu Lys Val Arg  
 20 25 30

Ala Gly Ser Val Pro Val Asn Gly Thr Met Met Gln Tyr Phe Glu Trp  
 35 40 45

Tyr Leu Pro Asp Asp Gly Thr Leu Trp Thr Lys Val Ala Asn Asn Ala  
 50 55 60

Gln Ser Leu Ala Asn Leu Gly Ile Thr Ala Leu Trp Leu Pro Pro Ala  
 65 70 75 80

Tyr Lys Gly Thr Ser Ser Ser Asp Val Gly Tyr Gly Val Tyr Asp Leu  
 85 90 95

Tyr Asp Leu Gly Glu Phe Asn Gln Lys Gly Thr Val Arg Thr Lys Tyr  
 100 105 110

Gly Thr Lys Thr Gln Tyr Ile Gln Ala Ile Gln Ala Ala His Thr Ala  
 115 120 125

Gly Met Gln Val Tyr Ala Asp Val Val Phe Asn His Lys Ala Gly Ala  
130 135 140

Asp Gly Thr Glu Leu Val Asp Ala Val Glu Val Asn Pro Ser Asp Arg  
145 150 155 160

Asn Gln Glu Ile Ser Gly Thr Tyr Gln Ile Gln Ala Trp Thr Lys Phe  
165 170 175

Asp Phe Pro Gly Arg Gly Asn Thr Tyr Ser Ser Phe Lys Trp Arg Trp  
180 185 190

Tyr His Phe Asp Gly Thr Asp Trp Asp Glu Ser Arg Lys Leu Asn Arg  
195 200 205

Ile Tyr Lys Phe Arg Gly Thr Gly Lys Ala Trp Asp Trp Glu Val Asp  
210 215 220

Thr Glu Asn Gly Asn Tyr As